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**A new interpretation of mitosis.**—In 1911 DEHORNE published two papers<sup>13</sup> setting forth a new interpretation for the phenomena of somatic and heterotypic mitosis in animals and plants. According to this author, the units usually called chromosomes are in all stages of all divisions associated in pairs, each pair having the value of a longitudinally split single chromosome. At metaphase they are not divided along this split, but are simply separated into two groups which pass toward opposite poles. During anaphase the members of each pair separate somewhat from each other and become secondarily split. After persisting through the resting stages as interlaced spiral threads, these two double structures are finally separated at the next metaphase. Thus the line of separation at any metaphase is determined during the second preceding anaphase. The diakinetid pairs are in like manner regarded as longitudinally split somatic chromosomes. At the first maturation division one-half of these pairs goes to each pole, bringing about a reduction. During anaphase each member is longitudinally split as in the somatic mitoses. At the second division instead of separating into their longitudinal halves, they are distributed in two groups of double rods. According to this interpretation the haploid number of chromosomes in *Lilium* should be regarded as 6 and the diploid number as 12, rather than 12 and 24.

GRÉGOIRE,<sup>14</sup> in a very detailed description of the metaphase and anaphase in *Galtonia*, *Trillium*, and *Allium*, demonstrates clearly that in every case a dicentric separation of the halves of each chromosome occurs, and that there is no such pairing as DEHORNE has described. In a second short note<sup>15</sup> he shows, after a careful study of *Lilium*, that the phenomena of maturation follow the heterohomotypic scheme previously described by him, and contradict in all points the conclusions of DEHORNE. What is true of *Lilium* is held by GRÉGOIRE to be generally true of all higher plants and many animals. These results, together with those of MUCKERMANN<sup>16</sup> on *Salamandra* and other forms, are conclusive in showing that the interpretation of DEHORNE is wholly false.—L. W. SHARP.

<sup>13</sup> DEHORNE, A., Recherches sur la division de la cellule. I. Le duplicisme constant du chromosome somatique chez *Salamandra maculosa* Lour. et chez *Allium Cepa* L. Archiv f. Zellforschung 6:613-639. pls. 35, 36. figs. 2. 1911; Recherches sur la division de la cellule. II. Homéotypie et hétérotypie chez les Annélides polychètes et les Trématodes. Arch. Zool. Exp. et Gén. 9: 1911.

<sup>14</sup> GRÉGOIRE, V., Les phénomènes de la métaphase et de l'anaphase dans la caryocinèse somatique. À propos d'une interprétation nouvelle. Annales Soc. Sci. Bruxelles 34:pp. 36. pl. 1. 1912.

<sup>15</sup> ———, La vérité du schéma hétérohoméotypique. Compt. Rend. 155:1098-1100. 1912.

<sup>16</sup> MUCKERMANN, H., Zur Anordnung, Trennung, und Polwanderung der Chromosomen in der Metaphase und Anaphase der somatischen Karyokinese bei Urodelen. La Cellule 28:233-252. pls. 2. 1912.